1   **1. (original)** A method of analyzing a set of assets selected from a plurality of thereof,

2   historic returns data for the assets of the plurality being stored in storage accessible to a

3   processor and

4   the method comprising the steps performed in the processor of:

5   receiving inputs indicating assets selected for the set and for each asset, a desired

6   minimum return;

7   using the historic returns data to determine a probability that at least one of the

8   selected assets will not provide the desired minimum return indicated for the asset; and

9   outputting the probability.

1   **2. (original)** The method set forth in claim 1 wherein

2   the step of using the historic returns to determine a probability comprises the steps

3   of:

4   using the multivariate normal distribution for the returns of the assets to determine

5   the probability that each of the selected assets will provide the desired minimum return;

6   and

7   determining the probability that at least one of the selected assets will not provide

8   the desired minimum return from the probability that each of the selected assets will

9   provide the desired minimum return.

1   **3. (original)** The method set forth in claim 2 wherein:

2   in the step of using the multivariate normal distribution, the probability that each

3   of the selected assets will provide the desired return is determined using the real option

4   values of the assets.

1   **4. (original)** A method of optimizing a set of assets, historic returns data for the assets

2   being stored in storage accessible to a processor and

3   the method comprising the steps performed in the processor of:

4   receiving inputs indicating a set of scenarios for the set of assets, each scenario

5   having values which are used in optimizing the set of assets and which vary stochastically

6   between two extremes and a probability of occurrence for the scenario; and

7   determining weights of the assets in the set such that the worst-case value of the

8   set of assets is optimized over the set of scenarios.

1   **5. (original)** The method of optimizing set forth in claim 4 wherein:

2   the worst-case value of the set of assets is the worst-case real option value thereof;

3   and

4   the values which are used in optimizing are the mean return and the covariance.

1   **6. (original)** The method of optimizing set forth in claim 4 wherein:

2   a scenario in the set of scenarios may correspond to the historical returns data for

3   the assets in the set of assets.

1   **7. (original)** The method of optimizing set forth in claim 4 wherein:

2   a scenario in the set of scenarios may include certain assets in the set of assets

3   which are highly correlated.

1   **8. (original)** The method of optimizing set forth in claim 4 wherein:

2   a scenario in the set of scenarios may correspond to outliers in the historical

3   returns data.

1   **9. (original)** The method of optimizing set forth in claim 4 further comprising the step

2   of:

3   receiving inputs indicating additional constraints to which the set of assets being

4   optimized is subject; and

5   in the step of determining weights of the assets, determining the weights subject

6   to the additional constraints.

1   **10. (original)** A method of selecting a set of assets from a plurality thereof and

2   optimizing the weights of the assets in the set, historic returns data for assets being stored

3   in storage accessible to a processor and

4   the method comprising the steps performed in the processor of:

5   1)   selecting a set of assets on the basis of a probability that at least one of the

6   assets in a selected set will not provide the desired minimum return indicated for the

7   asset; and

1   2)   optimizing the weights of the assets in the selected set.

1   **11. (original)** The method set forth in claim 10 wherein:

2   the probability that at least one of the assets will not provide the desired minimum

3   return is determined using the real option values for the assets.

1   **12. (original)** The method set forth in claim 10 wherein:

2   optimizing the weights of the assets is done using the real option values for the assets.

1   **13. (original)** The method set forth in claim 10 wherein:

2   optimizing the weights of the assets is done using robust optimization.

1   **14. (original)** The method set forth in claim 13 wherein:

2   the robust optimization optimizes over a set of user-specified scenarios, each scenario

3   having values which are used in optimizing the set of assets and which vary stochastically

4   between two extremes and a probability of occurrence for the scenario.

1   **15. (original)** The method set forth in claim 10 wherein:

2   optimizing the weights of the assets is done subject to a constraint that the probability

3   that the set of assets yields a desired minimum return is greater than a user-specified value a.

1   **16. (original)** The method set forth in claim 15 wherein:

2   the optimization is done subject to a plurality of constraints $(1..n)$, a constraint c_{hi} specifying

3   that the probability that the set of assets yields a desired minimum return that is greater than a user-

4   specified value a_{ir}.

1   **17. (previously presented)** The method set forth in claim 15 wherein:

2   optimizing the weights of the assets in the set is done using robust optimization.

1   **18. (original)** The method set forth in claim 17 wherein:

1   **19. (original)** The method set forth in claim 10 wherein:

2   the asset may have a negative weight.

1   **20. (original)** The method set forth in claim 10 wherein;

2   the sum of the weights of the assets in the set may exceed 1.

1   **21. (original)** The method set forth in claim 10 wherein:

2   optimizing the weight of the assets is done subject to one or more additional

3   constraints.

1   **22. (original)** The method set forth in claim 21 wherein:

2   the additional constraint restricts the sum of the weights of the assets belonging

3   to a selected subset of the assets in the set.

1   **23. (original)** The method set forth in claim 21 wherein:

2   the additional constraint constrains the weight of an asset such that the amount of

3   the asset in the set is above a minimum investment threshold.

1   **24. (original)** The method set forth in claim 21 wherein:

2   the additional constraint limits constrains the set's downside risk to be less than a

3   predetermined value b

1   **25. (original)** The method set forth in claim 24 wherein;

2   the additional constraint is computed from the worst draw-down for each asset.

1   **26. (original)** The method set forth in claim 24 wherein:

2   the additional constraint is computed from the set's average return and standard

3   deviation.

1   **27. (original)** The method set forth in claim 12 wherein:

5

2   the method further includes the step of:

3   receiving an input indicating one of a plurality of objective functions for computing the

4   real option values for the assets; and

5   in the step of optimizing the weights of the assets, the optimization is done using the

6   indicated objective function of the plurality.

1   **28. (previously presented)** The method set forth in claim 12 wherein:

2   in the step of optimizing the weights of the assets, the objective function is adjusted by

3   assigning a premium or a discount to the real option value of one or more of the assets.

1   **29. (previously presented)** The method set forth in claim 28 wherein:

2   the objective function is adjusted to take non-normal returns for the asset into account.

1   **30. (original)** The method set forth in claim 28 wherein:

2   the objective function is adjusted to take liquidity characteristics of the asset into account.

1   **31. (original)** The method set forth in claim 28 wherein:

2   the objective function is adjusted to take tax sensitivity of an asset into account.

1   **32. (original)** The method set forth in claim 28 wherein:

2   the objective function is adjusted to take the length of time an asset has been available

3   into account.

1   **33. (original)** The method set forth in claim 12 wherein:

2   the method further includes the step of:

3   receiving an input indicating one of a plurality of modes of quantifying the risk of an

4   asset; and

5   in the step of optimizing the weights of the assets, the optimization is done using the

6   indicated mode of the plurality.

1   **34. (new)** The method set forth in claim 1 wherein:

2   the received inputs include a period of time; and

3   the probability is the probability over the period of time.

1   **35. (new)** The method set forth in claim 10 wherein:

2   the probability is the probability over a period of time.